

Method for Pre-Processing Speech**Abstract**

The invention provides a method for pre-processing speech, in particular in a method for recognizing speech, comprising the steps of receiving a speech signal (S), separating a spectrum (F) of said speech signal (S) into a given number (N) of

- 5 predetermined frequency sub-bands (F_1, \dots, F_N), analyzing said speech signal (S) within each of said frequency sub-bands (F_1, \dots, F_N), thereby generating respective band-dependent acoustic feature data (O_1, \dots, O_N) for each of said respective frequency sub-bands (F_1, \dots, F_N), which band-dependent acoustic feature data (O_1, \dots, O_N) are at least in part representative for said speech signal (S) with respect to
- 10 a respective frequency sub-band (F_1, \dots, F_N), deriving band-dependent likelihoods (b_1, \dots, b_N) for occurrences of speech elements (P_1, \dots, P_m) or of sequences thereof within said speech signal (S) based on said band-dependent acoustic feature data (O_1, \dots, O_N) and/or a derivative thereof, analyzing said speech signal (S) within said entire spectrum (F), thereby generating full-band acoustic feature data ($FBE-F; FFBE; FBE-F-SSUB; O_{F,SSUB}$), which are at least in part representative for said speech signal (S) with respect to said entire spectrum (F), deriving a full-band likelihood ($B_{FF}; B_{SSUB}$) for occurrences of speech elements (P_1, \dots, P_m) or of sequences thereof within said speech signal (S) based on said full-band acoustic feature data ($FBE-F; FFBE; FBE-F-SSUB; O_{F,SSUB}$) and/or a derivative thereof,
- 15 20 deriving an overall likelihood (B) for occurrences of speech elements (P_1, \dots, P_m) or of sequences thereof within said speech signal (S) based on said band-dependent likelihoods (b_1, \dots, b_N) and said full-band likelihood ($B_{FF}; B_{SSUB}$).

25 Fig. 1